1. Which of the following statements is incorrect about the vertex of a parabola?

**A.** It is either the highest or lowest point of a parabola.

**B.** It is the point where the parabola turns around.

**C.** It is the point where the parabola intersects the *x*-axis.

**D.** It is the first point that should be plotted when graphing a parabola.

2. The radius of a circle is…

**A.** the distance across the circle.

**B.** the distance from the center to the edge of the circle.

**C.** the distance around the outer edge of the circle.

**D.** none of the above.

3. Which of the following is an accurate description of the center of a circle?

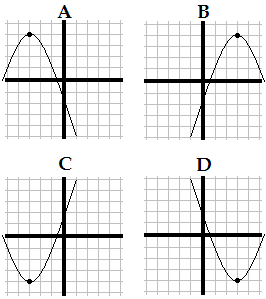
**A.** It is the intersection of all the diameters.

**B.** It is the midpoint of a radius.

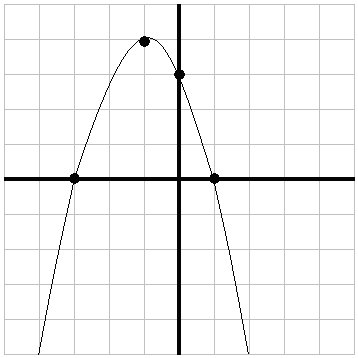
**C.** It is halfway between any two points on the circle.

**D.** All of the above are accurate descriptions of the center.

4. Which parabola has (3, -4) as its vertex?



5. What are the coordinates of the vertex of the parabola below?

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**A.** ( -3 , 0 )

**B.** ( -1 , 4 )

**C.** ( 0 , 3 )

**D.** ( 1 , 0 )

6. A parabola passes through the points ( 5 , -1 ) and ( -9 , -1). What do you know about the parabola’s vertex?

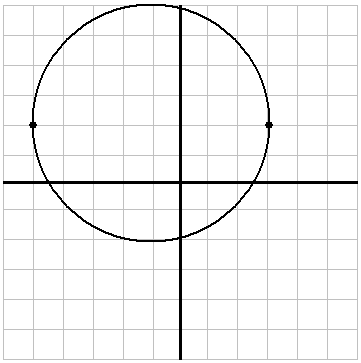
**A.** It has an *x*-coordinate of -2.

**B.** It has a *y*-coordinate of -1.

**C.** The *y*-coordinate is positive.

**D.** There is not enough information to conclude anything about the vertex.

7. What are the center and radius of the circle below?

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**A.** Center = ( 1 , 2 ); Radius = 8

**B.** Center = ( -2 , 1) ; Radius = 4

**C.** Center = ( 1 , -2); Radius = 8

**D.** Center = ( -1, 2 ); Radius = 4

8. A parabola has a vertex of (6 , 2) and passes through the point (4 , 7). What other point will the parabola definitely pass through?

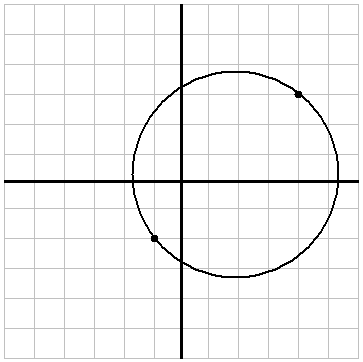
**A.** ( 2 , 2 )

**B.** ( 2 , 5 )

**C.** ( 8 , 7 )

**D.** ( 10 , 9 )

Use the picture below to answer questions 9 and 10.

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The two points given on the circle are at opposite ends of a diameter.

9. What is the center of the circle in the picture?

**A.** ( 2.5 , - 0.5 )

**B.** ( 2 , 0 )

**C.** ( 1.5 , 0.5 )

**D.** ( 1 , 1 )

10. To the nearest tenth, what is the radius of the circle in the picture?

**A.** 5.0

**B.** 7.1

**C.** 7.5

**D.** 10.0